

I'm not a robot



Android automotive vs android auto

Google's Android Auto and Android Automotive are two distinct solutions that enable hands-free use of your phone in your vehicle. Android Auto mirrors your phone on your car's display, while Android Automotive is an operating system running directly on the head unit, requiring no phone connection. Both share similarities due to their Android roots but have different approaches. Android Auto connects your phone to the head unit and mirrors it, whereas Android Automotive runs independently, replacing manufacturer infotainment software. Navigation and apps operate directly on the head unit, with voice control via Google Assistant. Key differences include integration with vehicle systems (Android Automotive), app selection (limited on Android Automotive), and compatibility (Android Auto only works with Android phones). Android Auto and Android Automotive: A Guide to Google's Car-Friendly Tools Android Auto offers several benefits compared to Android Auto alternatives like Apple CarPlay. It can run on a vehicle's head unit, providing seamless integration with the car and allowing users to control features such as air conditioning via voice commands. Unlike Android Auto and Apple CarPlay, it doesn't require a phone and is compatible with both Android phones and iPhones. However, its lack of integration with smartphones means it doesn't offer the same level of connectivity as Android Auto and Apple CarPlay. Despite this, Android Automotive has some advantages, including its wide availability in new vehicles and support for a variety of apps, including multiple navigation options. Despite being unveiled in 2014, the integration of Android Auto into vehicles took until 2015 to arrive for Android users, initially featured in the Hyundai Sonata. The feature has undergone significant improvements since then, with a makeover in 2019 and another UI overhaul in 2023. These updates have resolved many of its initial issues, such as charging problems and limited third-party app support. However, despite these advancements, Android Auto remains somewhat finicky, particularly when it comes to USB connectivity. In some vehicles, users must tap the Android Auto icon to launch it after plugging in their phone, and it may not fully sync with other car systems. Android Auto also offers a standalone experience on phone screens, but this version has since been replaced by Assistant Driving Mode. Despite its somewhat fragmented existence, Android Auto remains a robust platform for drivers on the road, available on over 500 car models and offering users their favorite apps and features in a convenient, unobstructed manner. Android Automotive offers a more integrated experience than Android Auto, as it controls your vehicle's in-cabin functions and is built into supported vehicles, eliminating the need for a smartphone. This new OS provides access to various car features, such as climate control, navigation, and Google Assistant, all within the car's infotainment system. Unlike CarPlay, which relies on the manufacturer's unique look, Android Automotive's appearance changes depending on the car model and manufacturer. In contrast, Android Auto is used by end-users, with Google directly speaking to them through the app. With Android Automotive, the automaker takes control over what is displayed on the screen, offering a more tailored experience for each vehicle. Google's new service, GAS, provides an app package that includes various Google applications, making it easier for drivers to access these services. This change in approach is a significant shift from how Android typically functions, where phone manufacturers follow specific rules and regulations through the Play Store. Now, carmakers can opt-in to use GAS as part of their vehicles, offering more flexibility and customization options. Android Automotive OS is an operating system installed directly onto a vehicle, whereas Android Auto connects your phone to the infotainment system via an app - think of it like a key enabler for software-defined vehicles. Android Automotive uses the same codebase as Android Open-Source Project (AOSP), adding specific features tailored to its underlying hardware, which is the vehicle itself. The car manufacturer installs this OS before shipping the vehicle, making it highly customizable and essentially an embedded Android version. On the other hand, Android Auto projects your phone's interface onto the infotainment system of compatible vehicles. This way, drivers can interact with their apps using voice commands and minimal touch interaction. It comes pre-installed on certain car infotainment systems and Android devices that have Google Mobile Services. Android Auto offers a distinct look regardless of which car you're viewing it from and has easy setup for seamless phone-to-car screen mirroring. Its hands-free access to essential apps promotes safer driving practices, offering convenience and security while staying connected behind the wheel. Android Auto vs Android Automotive OS: Differences and Similarities Compared to Android Auto, Android Automotive offers more control over the vehicle due to its deep integration with the car's hardware. For instance, you can adjust the temperature or radio station using Android Automotive. In contrast, Android Auto operates independently of many car components. Android Automotive also runs without needing a phone, and it supports non-Android smartphones. Android Automotive has several advantages over Android Auto, including automatic operation in the vehicle, deep integration with the vehicle's hardware, and control over car-specific features like temperature. Car manufacturers like Polestar, Volvo, Ford, Honda, Chevrolet, Cadillac, Lincoln, and Nissan have adopted Android Automotive as their infotainment system. Key differences between Android Auto vs Android Automotive include connectivity (Android Auto requires a phone connection, while Android Automotive uses its own SIM card slot or mobile tethering), internet access, and Google app availability. Android Auto vs Android Automotive: Key Differences Cars can benefit from internet connections to receive firmware updates, bug fixes, and security patches. Android Auto relies on your phone's regular internet connection, while Android Automotive connects directly to the car's infotainment system via Bluetooth or other means. You don't need an Android device for Android Automotive, but it requires a compatible infotainment system or smartphone OS. Google Assistant is available on both Android Auto and Android Automotive, with deeper integration in the latter. Android Auto supports Google apps like Maps, while app developers are slower to adapt their apps to work with Android Automotive. No recent list exists of apps that work on Android Automotive, but some vehicles offer app-based navigation through corresponding Android car operating systems. Android Auto is compatible with any Android smartphone and requires a certified infotainment system for use. In 2024, over 560 vehicle models support Android Auto, and it's now available in more affordable vehicles. Android Automotive can be installed without Google Maps or Assistant, allowing OEMs to partner with other services like Amazon. GMS (Google Mobile Services) offers an Android version without Google apps on the Play Store. OEMs need certification for Google's apps, including a license agreement. In Android Automotive OS, we have GAS (Google Automotive Services), similar to GMS, offering Google apps and licenses. App providers must become GAS partners to add their apps to the specific Play Store in Android Automotive OS. This ensures all apps are enhanced for vehicle cockpits. GAS differs from Android Auto, which brings app functionality via an app on a dashboard and connection to an Android smartphone. On devices with GAS, Google apps can be used directly within the infotainment system without needing an externally connected device running Android Auto. Android Automotive OS comes with OTA (Over-the-Air) updating abilities like its phone/tablet counterparts. Updates ensure software security and driver safety. Without GAS, Android Automotive allows OTA updates but lacks infrastructure for distribution. OEMs need to factor in how to carry out these updates, where emteria can help with building, delivering, and installing OTA updates through a secured infrastructure. Emteria specializes in custom Android OS development and provides enterprise-grade solutions, standing ready to offer Android Automotive customization. From March 27, 2025, it's recommended to use android-latest-release instead of aosp-main for building and contributing to AOSP. Android Automotive is a variant of Android designed specifically for in-vehicle infotainment systems. It runs pre-installed IVI system apps, as well as optional second- and third-party Android apps. This platform offers openness, customization, and scale to automotive systems. Openness enables efficiency through a free and open-source codebase, while customization allows implementers to differentiate their product. Scale is achieved through Android's common framework, language, and APIs, enabling the reuse of development expertise and completed software from hundreds of thousands of Android developers worldwide. Android Automotive is not a separate fork or parallel development of Android; it is the same codebase as the Android used on phones and tablets. It builds upon a robust platform and feature set developed over 10+ years, leveraging existing security models, compatibility programs, developer tools, and infrastructure while remaining highly customizable and portable. In building Android Automotive, we're adding support for automotive-specific requirements, features, and technologies. This full-stack, turnkey platform is designed to power infotainment systems in vehicles, bringing the power of Android to the car. To clarify the naming convention: Android Auto is a platform running on a user's phone, projecting the Android Auto experience to a compatible in-vehicle system over a USB connection. Android Automotive is an operating system and platform that runs directly on the in-vehicle hardware, powering the infotainment experience. Google Automotive Services (GAS) is a collection of applications and services that automotive OEMs can license and integrate into their IVI systems. [{"complicated"}, {"too many steps"}, {"Out of date"}, {"Samples / code issue"}, {"Other"}]] [{"Last updated", "2025-04-04"}, {"UTC"}]] [{"